

CLAIMS

1. A coating for the inspection of a crack in a structure wherein a coating layer having dispersed therein microcapsules with a visualizing liquid sealed therein is formed on the surface of the structure and when a crack is developed in said structure and propagated to said coating layer, the microcapsules dispersed in said coating layer are ruptured and said visualizing liquid flows out from the ruptured microcapsules and reaches the surface of the coating layer along the crack in the coating layer, thereby making it possible to detect the occurrence of the crack in said structure, characterized in that at least one second coating layer not containing the microcapsules is formed over said first coating layer with the microcapsules dispersed therein, said second coating layer being transparent and having an outermost layer flexible enough to be prevented from being cracked even upon cracking in the first coating layer.
2. A coating for the inspection of a crack in a structure according to claim 1, wherein the amount of elongation of said outermost layer is seventeen times or more as large as the amount of elongation of any other layer if present than the outmost layer in said second coating layer.

3. A coating for the inspection of a crack in a structure according to claim 1 or claim 2, wherein said visualizing liquid sealed in said microcapsules contains as principal components a nigrosine compound and a solvent in a weight ratio of the nigrosine compound to the solvent in the range of 1:55 to 1:0.37.
4. A coating for the inspection of a crack in a structure according to claim 1 or claim 2, wherein an adhesive strength under shear between the outermost layer in said second coating layer and the immediately underlying coating layer is not higher than 1 MPa.
5. A coating for the inspection of a crack in a structure according to any of claims 1 to 4, wherein said second coating layer comprises a colored, opaque intermediate layer and a transparent outermost layer.
6. A coating for the inspection of a crack in a structure according to any of claims 1 to 5, wherein said structure is a metallic structure.
7. A coating for the inspection of a crack in a structure wherein a coating layer having dispersed therein microcapsules with a visualizing liquid sealed therein is formed on the surface of the structure and when a crack is developed in said structure and propagated to said coating layer, the microcapsules dispersed in said coating layer

are ruptured and said visualizing liquid flow out from the ruptured microcapsules and reaches the surface of the coating layer along the crack in the coating layer, thereby making it possible to detect the occurrence of the crack in said structure, characterized in that said visualizing liquid sealed in said microcapsules contains as principal components a nigrosine compound and a solvent in a weight ratio of the nigrosin compound to the solvent in the range of 1:55 to 1:0.37.